



## PRECAST REINFORCED CONCRETE MANHOLE AND DROP INLET SECTIONS FIELD SECTION 1033

**1033.1 SCOPE.** To establish procedures for the inspection, acceptance, and reporting of precast reinforced concrete manhole and drop inlet sections and appurtenances such as ~~grade~~ rings, tops, and special sections.

### 1033.2 APPARATUS

- (a) Rule with suitable graduations to accurately measure the material to be inspected.
- (b) OK - MoDOTstamp.
- (c) Weather resistant marking materials.

**1033.3 PROCEDURE.** Acceptance of precast concrete manhole and drop inlet sections, including risers and tops, is to be based on the inspection of materials being incorporated into the sections; compressive tests on cured concrete cylinders or cores taken from the wall of a section; absorption tests; and inspection of the finished section, including amount and placement of reinforcement. If Class B or B-1 concrete is used, compressive tests and absorption test specimens will not be required.

**1033.3.1** Inspection and reporting of coarse aggregate, fine aggregate, cement, fly ash and reinforcing steel shall be as described in [Field Sec 1026](#) of this Manual unless Class B or B1 concrete is used. When Class B or B1 concrete is used; materials, proportioning, mixing, slump, and transportation of portland cement concrete shall be in accordance with Specification Sec 501. Air entrainment will not be required. If welded wire fabric is used for precast drop inlets, it shall be sampled in accordance with [Field Sec 1036](#) of this Manual. The mix design and proportioning shall be restricted that a minimum of 564 pounds [335 kg] of cement per cubic yard [meter] is required.

**1033.3.2** Compressive tests may be made on either standard rodded concrete cylinders or cylinders compacted and cured in a similar manner to the sections under test in accordance with AASHTO T23 or, at the option of the manufacturer, on cores drilled from the wall of the sections in accordance with AASHTO T280. Cylinders or cores are to be tested in accordance with Specification Sec 1033.9. Occasional individual cylinders may fall below the design strength for some unknown reason. If the inspector feels an occasional individual cylinder of a paired set is not representative of the process, it may be disregarded. However, not more than 10 percent of the cylinders tested shall fall below the design strength. In no case shall the strength of any cylinder tested fall below 80 percent of the design strength. Compressive tests are to be performed at the fabricating plant unless questionable results are being obtained, in which case the cylinders or cores may be submitted to the Laboratory. SiteManager is to be used to create the sample record for submitting cylinders or cores to the Laboratory



**1033.3.3** Absorption tests shall be made on a core cut from the full wall thickness. Samples for absorption tests are to be submitted to the Laboratory. SiteManager is to be used to record this test.

**1033.3.4** The sections are to be inspected for amount and placement of reinforcing steel. The amount and placement of reinforcing steel in rectangular drop inlets is to be as shown on Standard Drawing 731.00. Reinforcing steel for all other sections is to be as specified in Specification Sec 1033.

**1033.3.5** The finished sections are to be examined for conformance to dimensions, workmanship, and marking. All permissible variations in dimensions and rejection criteria for workmanship are specified in Specification Sec 1033. Each section shall be marked by the manufacturer with date of manufacture and name or trademark of the manufacturer. Manhole sections shall be designated with "MH". Marking shall be by indenting into the concrete or painting on with waterproof paint. Accepted sections are to be marked with "OKMoDOT" by the inspector. Rejected sections are to be marked with a single vertical mark, near the manufacturers marking and shall be made with weather resistant marking material.

**1033.3.6** Procedures for submitting special or modified designs are described in Specification Sec 1033.5.

#### **1033.4 SAMPLE RECORD**

**1033.4.1** The plant inspector located at the concrete proportioning plant shall create a SiteManager sample record for each day's pour documenting the class of concrete poured and the units manufactured from that pour. The name of the manufacturer or set-up must be shown.

**1033.4.2** Finished sections shall be reported through SiteManager. The following information is to be included on the appropriate template, in addition to that normally required for a sample record:

- (a) Quantity, size and length (i.e., 8-2'x 3'-6.0'long) [8-600 mm x 900 mm-1800 mm long].
- (b) Date of production.
- (c) Description (as to type of inlet, etc.).
- (d) ID No. or reference number, if needed.